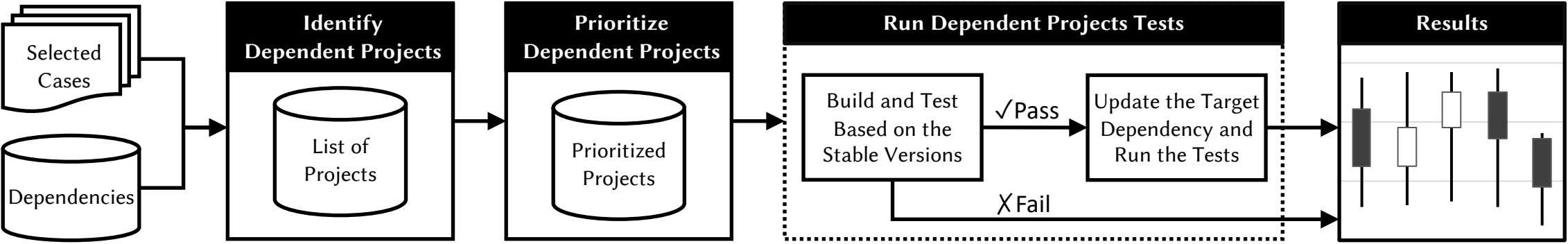
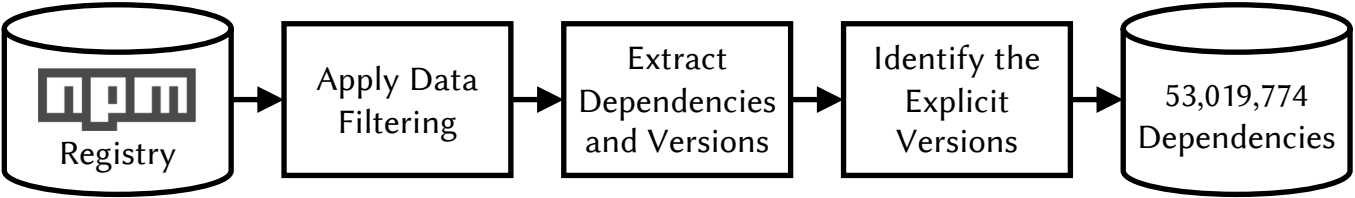
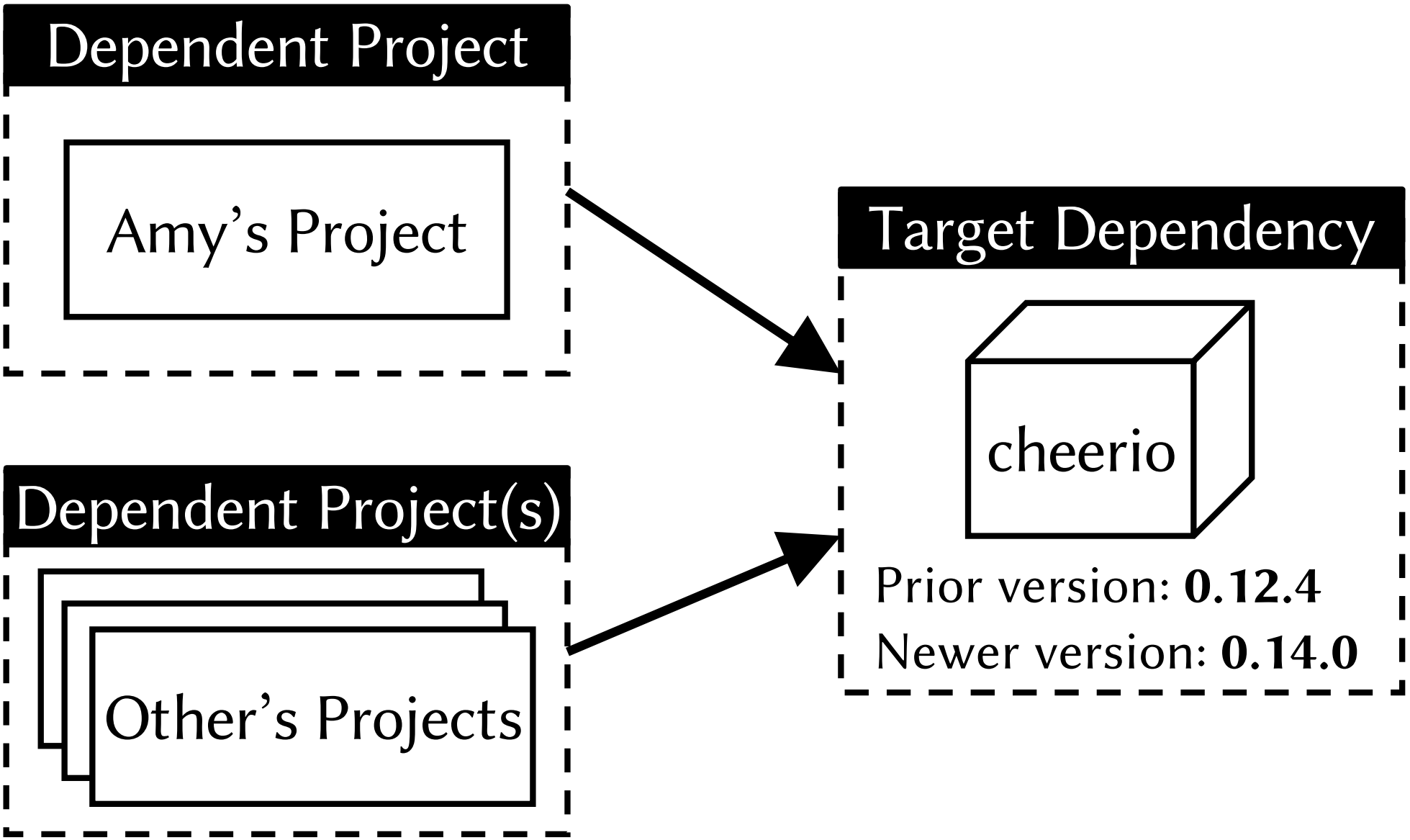
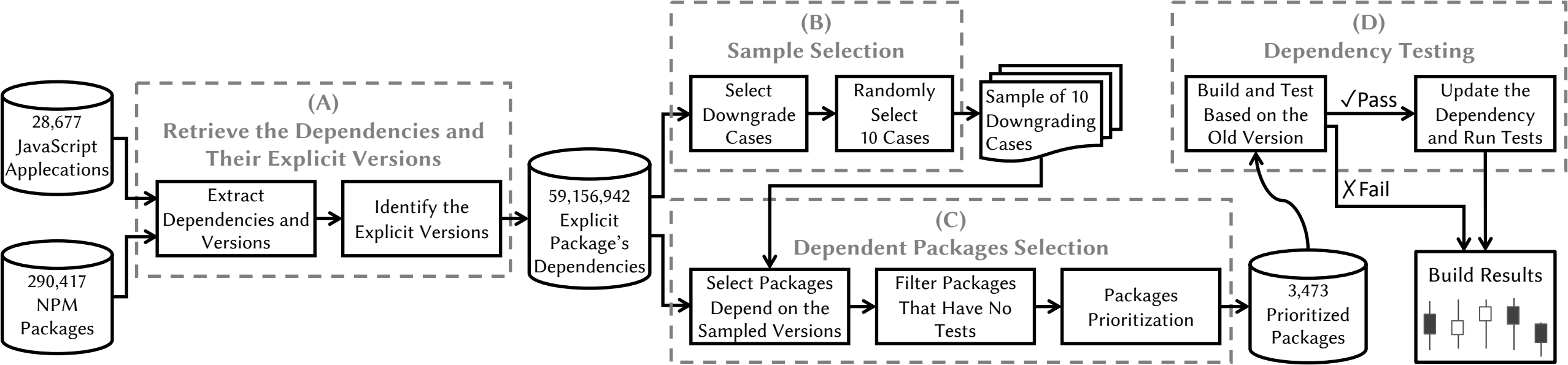
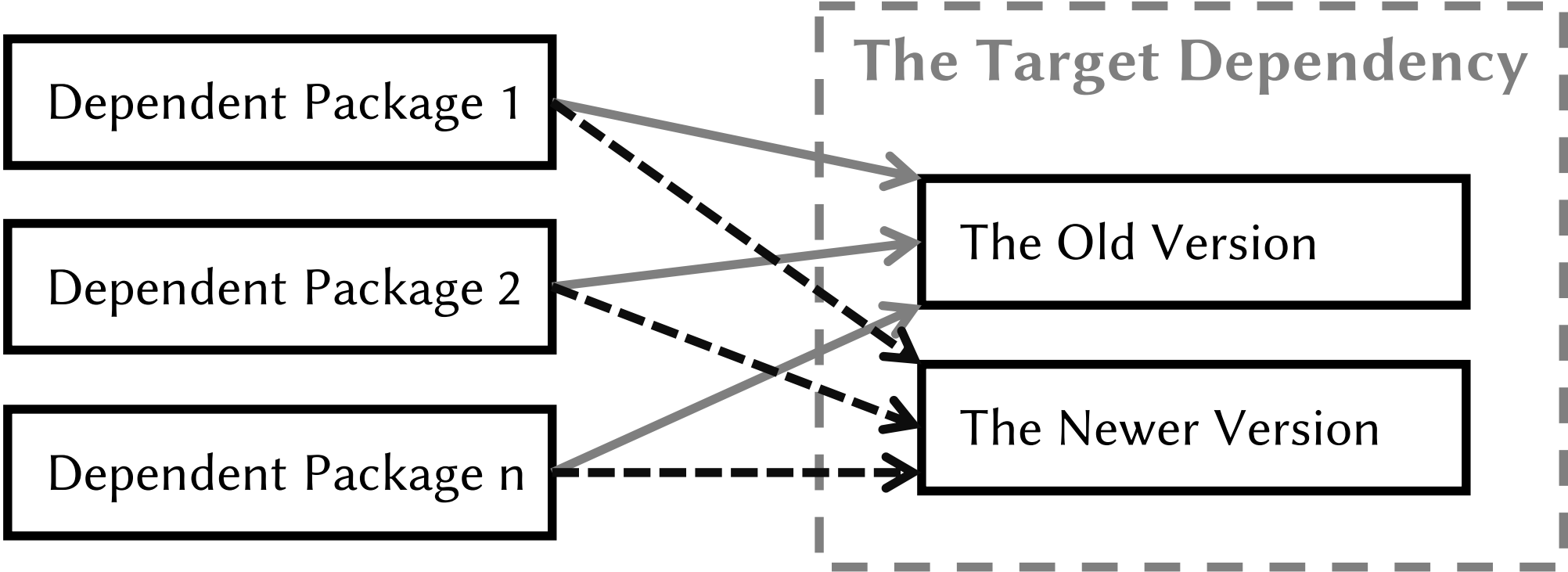

Selected Cases
Dependencies
Identify Dependent Projects
List of Projects
Prioritize Dependent Projects
Prioritized Projects
Run Dependent Projects Tests
Build and Test Based on the Stable Versions
✓Pass
Update the Target Dependency and Run the Tests
✗Fail
Results


npm
Registry
Apply Data Filtering
Extract Dependencies and Versions
Identify the Explicit Versions
53,019,774 Dependencies


Dependent Project
Amy's Project
Dependent Project(s)
Other's Projects
Target Dependency
cheerio
Prior version: 0.12.4
Newer version: 0.14.0


28,677 JavaScript Applecations
290,417 NPM Packages
(A)
Retrieve the Dependencies and Their Explicit Versions
Extract Dependencies and Versions
Identify the Explicit Versions
59,156,942 Explicit Package's Dependencies
(B)
Sample Selection
Select Downgrade Cases
Randomly Select 10 Cases
Sample of 10 Downgrading Cases
(C)
Dependent Packages Selection
Select Packages Depend on the Sampled Versions
Filter Packages That Have No Tests
Packages Prioritization
3,473 Prioritized Packages
(D)
Dependency Testing
Build and Test Based on the Old Version
✓Pass
Update the Dependency and Run Tests
✗Fail
Build Results


Dependent Package 1
Dependent Package 2
Dependent Package n
The Target Dependency
The Old Version
The Newer Version